7 Improvements to Operations/Facility

This section documents improvements to the Santa Maria Landfill facility and operations since the date of the last submitted Revised ROWD (IT Corporation, 1992). Improvements to operations and the facility include expansion of the landfill monitoring systems, installation of a landfill gas extraction system, filling and grading of the (former) Radio Towers lease area, establishment of final grades, and installation of perimeter drainage structures as a part of the final drainage system.

7.1 Landfill Monitoring Systems

Since June 1992, numerous improvements to the landfill monitoring systems for groundwater and LFG have been made. In the summer of 1992, onsite groundwater monitoring wells MW-1 to MW-8 were abandoned and replacement wells MW-1R to MW-8R were installed to more accurately monitor the quality of groundwater in the shallow groundwater. Twelve additional groundwater monitoring wells, including seven outside the landfill property, were subsequently installed between the summer of 1992 and July 1996 as part of the evaluation monitoring program to assess the extent of groundwater contamination. Specifics and the rationale for installation of the eight replacement wells and 12 additional wells are discussed in greater detail in Section 4.

In order to conform with applicable regulatory requirements for active and closed landfill sites (27 CCR 20919.5 and 20291, respectively), a perimeter LFG migration monitoring well system at the landfill, consisting of 22 landfill gas monitoring wells was installed along the southwestern property boundary of the site in 1993. Two additional monitoring wells were added to the system in 1995 and two in 1997. The total LFG monitoring system currently consists of 26 LFG monitoring wells (50 monitoring probes); 24 of the monitoring wells consist of nested, dual-depth probes and two of the monitoring wells consist of single-depth probes. As with the groundwater monitoring wells, the specifics and the rationale for installation of the LFG monitoring wells are discussed in greater detail in Section 4. Note in accordance with WDR Order No. 94-63, Part I.E.1.C, soil pore gas in the vadose zone is sampled and tested as an alternative to sampling the soil pore liquid.

7.2 Landfill Gas Collection System

The first phase of a LFG gas collection system has been installed at the Santa Maria Landfill, and a second phase is planned. The primary objectives for installation of the LFG collection system are to:

- Control lateral migration of methane at the property boundary of the landfill.
- Control the source of LFG-related groundwater contamination.
- Control surface emissions of LFG.